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TYPES OF INDUSTRIAL ESTATES

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TYPES OF INDUSTRIAL ESTATES

Areas planned for the establishment of groups of industries are known by different names in different countries. The most common names are "industrial estate", "industrial park", "industrial district", "industrial subdivision", "trading estate", "industrial area", "industrial tract" and "industrial zone". The literature on the subject has tended in recent years to treat the first five terms as synonymous with each other and to use "industrial estate" as the generic concept. The terms "industrial area" and "industrial tract" are usually used to denote the same type of industrial clustering, but different from the industrial estate. The term "industrial zone" is used as different from both "industrial estate" and "industrial area".

An attempt will be made in this paper to distinguish the main categories of industrial estates on the basis of the facilities and services which they may provide, their location and their functions. The distinction between industrial "estate", "area" and "zone" mentioned earlier is based on the type of facilities and services provided and will therefore be discussed under this heading.

I. TYPES BASED ON FACILITIES AND SERVICES

Industrial areas, zones, townships and estates

An industrial area may be defined as a tract of land developed according to a comprehensive plan for the use of a group of industrial units. Development includes transportation facilities, internal roads and streets and installation of utilities; no factory buildings are provided by the sponsoring authority. An industrial area should be distinguished from an industrial zone which is an area in which land is restricted to industrial uses by authority of the government or local bodies, in which no facilities and promotional services are provided. An industrial area may be part of an industrial zone, but it is a distinct area planned and developed for the use of a community of industrial enterprises, which itself may be zoned for different

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types of industries. Again, an industrial area should be distinguished from an industrial township. An industrial township is similar to an industrial area with regard to provision of basic facilities for development of industries, but provides in addition for housing accommodation and other similar amenities associated with a town.

In industrially advanced countries, provision of developed plots may be adequate for the stimulation of industrial development. Even in developing countries industrial areas may be adequate encouragement for large industries which have the necessary capital and technical resources to construct buildings of their own, but the case of small-scale industries in developing countries is different. The main problem of small-scale industries in developing countries is their weakness arising out of a variety of factors such as inadequate capital and lack of technical and managerial knowledge. Even if they are able to raise the capital, the formalities of acquiring a suitable plot of land, getting building plans approved by the local authorities, securing supply of water, power, gas and other such facilities represent formidable difficulties. The formalities involved and the multiplicity of agencies and authorities to be approached often discourage the small industrialist from putting up a factory building. Sometimes he may not have even plans and ideas of his own about the right type of buildings which he requires and may need technical advice even on this. In these circumstances industrial estates with built up factory accommodation and services, rather than industrial areas will be the best pattern suitable for small-scale industries in developing countries. It is proposed to use the term "industrial estate" in this paper to refer to planned clusterings of industrial enterprises with built up factory accommodation and services as distinguished from industrial areas with developed plots.

Estates with general-purpose and custom-built factories

Built-up factory accommodation in industrial estates may be of two types: (a) general-purpose or standard factories and (b) custom-built factories. General-purpose factories are buildings of standard

sizes erected in advance of demand. To build factories of various sizes in anticipation of demand, the planners of industrial estates have to make an intelligent assessment of the requirements of prospective tenants. Experience shows that general-purpose factories can meet satisfactorily the requirements of the vast majority of tenants. Estates with standard factories have some special advantages. Standardization leads to certain economies in construction which are not possible in custom-built factories. Further, in certain circumstances provision of factory facilities in advance serves as a positive inducement to new enterprises. Industrial estates are not intended merely as projects for meeting the existing demand for factory accommodation. In certain areas, particularly in industrially backward areas, the availability of factory buildings serves as a factor for creating the demand.

Custom-built factories may have to be provided for in special cases where manufacturing operations demand special types of buildings. As a rule, the demand for custom-built factories for small-scale industries will be comparatively small. Such factories should be allotted to industrial units on sale or hire-purchase basis and not on rental basis for short duration, as it will be difficult to find new tenants having identical requirements, when vacancies arise.

The most flexible arrangement will be to combine in an estate both general-purpose and custom-built factories. Decisions regarding the type of buildings to be provided in an estate depend on the prospective demand for factory accommodation and need to be taken with reference to the special circumstances of each case.

Estates with common service facilities

A common feature of all industrial estates is the provision of general facilities such as power, water, gas, transport, fire protection, watch and ward, first aid, canteen and so on. In some estates, general facilities include, in addition, warehouses, bank, post office, library, sales depots, show rooms, reading rooms, conference rooms, etc. Industrial

estates for small-scale industries usually provide certain technical service facilities as a measure of assistance to the tenants. These facilities, generally known as "common service facilities", may include maintenance and repair shop, machine lease shop, tool room, laboratory for testing and quality control, foundry, forge, electroplating and other services. Common service facilities are invariably provided by the estate authorities on a no-loss no-profit basis. In some cases they are organized and managed by the estate authority during the initial period and later turned over to the tenants to be operated by them on co-operative lines.

Common service facilities such as the first four mentioned above may be required on most industrial estates, irrespective of their composition, since they may serve economically and efficiently the needs of most of the occupants. Special technical facilities can be provided in an estate economically only if there is an adequate number of industrial units belonging to the same or allied trades.

An important merit of an industrial estate is that it permits to integrate most schemes of promotion, assistance and training for small entrepreneurs. Small industries in developing countries are in great need for technical and managerial guidance and assistance, the usefulness of which will be maximized when combined with other services and facilities available in industrial estates. It is, therefore, recommended that industrial estates for small-scale industries in developing countries should combine both types of facilities.

II. TYPES BASED ON LOCATION

Industrial estates have been used in different countries for a variety of purposes. By and large their main objective has been planned development of industries, but in some countries, industrial development through industrial estates has been considered as a means for development of certain areas or regions. Thus, in the United Kingdom industrial estates have been serving the main objective of development of less developed or depressed areas. In some countries industrial estates

have been utilized in connexion with the development of ports, airports and railroad centres. Elsewhere, their main objective has been to relieve congestion in big cities and towns and, therefore, to provide alternate accommodation in areas far away from urban and metropolitan centres. In a few developing countries, industrial estates have been used as a tool for the industrialization of rural areas. On the whole, three main types of estates can be distinguished on the basis of location, each one presenting special characteristics: estates located in or near big cities; estates located in small towns; and estates located in rural areas.

Estates in or near big cities

In general, small-scale industries tend to develop in big cities because of the obvious advantages offered by these locations. The "external economies" found there include, in addition to easy availability of power, gas, water and transport facilities, a supply of trained labour and the best market for industrial products. However, in most cities, small-scale industries usually develop in an unplanned manner, and are often located in places least conducive to productivity, such as residential buildings and areas where limitations of space and absence of alternate accommodation prevent their growth and expansion and where a number of social and hygienic problems arise. For these reasons and in order to check further urban congestion, planners often endeavour to divert industry from the big towns, and to steer it towards the outlying areas. The achievement of this objective may be facilitated by the provision of industrial estates in the suburbs or areas within commuting distance from the city.

There is justification for locating industrial estates in or near big cities when the estates are expected to have a demonstration effect. In developing countries the first series of estates are usually established by the Government. They are expected to be demonstration projects to provide incentive and guidance to private entrepreneurs to organize similar projects on their own initiative. It is in the big cities that the maximum demonstration effect is likely to be achieved.

Slum clearance and urban improvement are given high priority in the development programmes of many developing countries. Even though the policy of most countries is to move industries out of the big cities and towns, it may sometimes become necessary to provide alternate accommodation to small industrial units affected by slum clearance and city improvement programmes in or near the city itself. Location of industrial estates in or near big cities will become necessary in such circumstances.

"Flatted factories" or multi-storeyed factories have sometimes been recommended as an appropriate pattern of industrial accommodation in big cities, the main justification for this pattern being the acute scarcity of land suitable for factory accommodation in such locations. However, flatted factories present special problems like transport of goods and employees from floor to floor and may be suitable only for certain types of industries. Provision of special services like lifts, hoists, ramps and so on may prove to be very costly and raise the rent beyond the means of small entrepreneurs. Except in exceptional cases, this pattern does not appear to be a substitute for industrial estates in developing countries.

Industrial estates in small towns

A major objective of industrial estate programmes in many countries, developed or less developed, is the promotion of dispersed industrial development. In developing countries there may be a danger in pushing such a policy too far. In those countries, the basic problem is to stimulate the growth of industry, and dispersal policies may have to be subordinated to development possibilities. In the advanced countries, basic facilities for industrialization such as roads, railroads, electricity and water are generally available in most places, though there may be marked variations in other factors like availability of skilled labour, markets and raw materials. In the developing countries many small towns lack the basic facilities and location of industries in such places may meet with considerable difficulties or result in

failure. An industrial estate may accentuate the advantages of the facilities, where these exist, but cannot be a substitute for them. If the estate projects were to provide all the basic facilities, they would prove to be very costly for the industrial units concerned. However, in locations with inadequate infrastructure but where, because of the existence of raw materials, adaptable labour, sufficient transportation facilities and potential market, there are reasonable prospects for the development of industry, the establishment of an industrial estate may provide a justification for supplying certain infrastructure facilities, even, if need be, on a limited scale. For instance, diesel generators may be installed or some water works constructed for the industrial estate, as a first step in a more comprehensive infrastructure development programme for the town or the surrounding area. Therefore, the policy of location of industrial estates should tend to select the most advantageous location consistent with the need for dispersal. Experience of some developing countries like India shows that by and large small towns offer satisfactory conditions for the dispersed development of small-scale industries.

In the industrial estates of small towns, the provision of services and facilities may be more costly and more difficult than in those of big cities because of the absence of alternative sources of assistance. While an industrial extension centre with a small permanent staff will be a necessity on such estates, arrangements may be made for visits, periodically or in case of need, by roving specialists or teams of experts from a main extension centre.

Industrial estates in small towns will be mainly aimed at the promotion of new enterprises. There will be a comparatively smaller number of existing industries in such areas requiring rehousing in new factory buildings. To a limited extent industrial estates in small towns may provide accommodation to industries migrating from big cities in pursuance of the government's policies for re-location and distribution of industries, or for branch units of existing industries; but generally the role of industrial estates in small towns will be one of promotion of new locally-sponsored industries.

Industrial estates in rural areas

Industrial estates have often been recommended as an effective means in rural industrialization programmes. It is, however, necessary to stress the obvious limitations of such programmes. The main cause of the slow pace of industrialization in rural areas is the absence of the minimum facilities required for industrial development or the uneconomic price the entrepreneur has to pay for them. Rural areas are predominantly agricultural and only "quasi-industrial" activities are pursued by rural artisans like carpenters, blacksmiths, weavers, cobblers and potters. Rural artisans as a class do not show much inclination in establishing small-scale industries, and even the few who are interested in industry choose to move to the towns and cities. Enterprising industrialists and skilled workers from the urban areas are equally reluctant to go over to rural areas because of the lack of economic and social facilities. It is obvious that by itself an industrial estate will not be able to fill up these gaps and even if it does, it will be at a very high cost. Industrial estates may, however, be feasible in rural areas in special circumstances where rural location provides certain competitive advantages and economies like proximity to the main raw materials or availability of specialized skills.

In some countries industrial estates have been recommended for rehabilitation and development of the artisan trades. The main limitation of such a programme is that there may not be adequately large concentrations of artisans in one place to justify an estate. The rural artisans are generally reluctant to move far out from their places of residence, and it will be difficult to induce them to make use of the facilities in industrial estates if these are not located very near their own places. The solution to this problem is to provide simple worksheds or workshop blocks to artisans rather than industrial estates of the conventional type.

III. TYPES BASED ON FUNCTIONS

The general type of industrial estate is one which provides accommodation to all trades, subject of course to the restrictions on "obnoxious" industries and in some cases, on heavy consumers of water or power. However, some special types of industrial estates may be distinguished on the basis of their functions. The chief among them are single-industry estates, functional estates, ancillary estates and nursery estates.

Single industry estates

These are industrial estates providing factory accommodation exclusively to industrial units belonging to the same trade. For example, there can be separate industrial estates for manufacturing of leather goods, pottery, wooden furniture and so on. The main advantage of single-industry estates is that technical common service facilities can be organized efficiently and economically for the benefit of the tenants. There are also special economies and conveniences in collective purchase of raw materials and joint efforts in sales of finished products. Such estates are particularly useful for the rehabilitation of declining industries and the promotion of new industrial complexes.

Functional estates

A functional estate is one in which the functions of one industry are subdivided among a number of small-scale units located in one place, each functioning according to a co-ordinated manufacturing programme. The main advantage of a functional estate is that it can provide to small-scale units the economies and efficiencies of specialization and large-scale production. For example, a functional estate for radios or sewing machines may have a large number of small-scale units manufacturing components and parts and one central assembly and finishing unit. The industrial units will have the advantage of specialization and standardization and also the economies of production on a large scale.

Functional estates are particularly suitable for co-operative ventures. They also encourage small industrialists to enter new fields of manufacture which normally may not be feasible on a small-scale basis.

Ancillary estates

These are estates in which different small-scale units manufacture components, parts and stores which are required by a large industrial unit, on a sub-contracting basis. They are located generally in close proximity to the large industrial unit to facilitate technical supervision and assistance and economic transport.

In the early stages of small industry development, small units are usually encouraged to take up the manufacture of consumer goods. In many developing countries, large industries are reluctant to farm out orders to small-scale units and prefer to produce all components, parts and stores under their own roof. With the improvement in the production standards of small-scale industries and growing awareness of large firms about the advantages of sub-contracting, a vast field is being thrown open for small industries outside the manufacturing of consumer goods. Industrial estates appear to be an effective means of assisting small-scale units to take up the manufacture of even sophisticated components and parts required by large industries. In some of the successful ancillary industrial estates in India, the large firms undertake the responsibility of training skilled workers, and provide their sub-contractors with certain raw materials, technical guidance and quality control.

A danger to be guarded against in organizing ancillary estates is the exploitation of the small units by the parent company. The small units should be completely independent of the large units in management and control. Ancillary relationship should not result in placing the small units in a subordinate position fettering their growth and development. If organized on proper lines, ancillary estates can prove to be effective tools for the healthy development of small industries.

Nursery estates

Nursery estates are those which provide "nursery" or "nest" factories to meet the transitional space requirements of small enterprises as they develop from one phase of growth to another. The nest factories are divided into small workshop units, and as the small industrial unit grows from year to year, it is allowed to occupy more and more workshop space. However, it has to vacate the estate and set up its own factory building after it grows out of the nursery stage so that the space can be allotted to a new unit requiring "nursing". Nursery estates have not been tried extensively to justify general conclusions on their effectiveness. Prima facie they appear to be suitable for trial in developing countries.